

seating area. A rescue access window may be located within an exterior side door in the passenger compartment if it is not practical to place the access window in the side of the seating area. (See Figures 2 and 2a of this subpart.)

(ii) Only one rescue access window is required in a seating area in a passenger compartment if—

(A) It is not practical to place a rescue access window in a side of the passenger compartment due to the need to provide accessible accommodations under the Americans with Disabilities Act of 1990;

(B) There are no more than four seats in the seating area; and

(C) A suitable, alternate arrangement for rescue access is provided.

(iii) For passenger cars ordered prior to April 1, 2009, and placed in service prior to April 1, 2011, only one rescue access window is required in a seating area in a passenger compartment if—

(A) It is not practicable to place an access window in a side of the passenger compartment (due to the presence of a structure such as a bathroom, electrical locker, or kitchen); and

(B) There are no more than eight seats in the seating area.

(4) *Cars with a sleeping compartment or similar private compartment.* Each level of a passenger car with a sleeping compartment or a similar private compartment intended to be occupied by a passenger or train crewmember shall have a minimum of one rescue access window in each such compartment. For purposes of this paragraph, a bathroom, kitchen, or locomotive cab is not considered a “compartment.”

(5) *Dual-function windows.* If, on any level of a passenger car, the emergency window exits installed to meet the minimum requirements of § 238.113 are also intended to function as rescue access windows, the minimum requirements for the number and location of rescue access windows in paragraphs (a)(1) through (a)(4) of this section are also met for that level.

(b) *Ease of operability.* On or after April 1, 2008, each rescue access window must be capable of being removed without unreasonable delay by an emergency responder using either—

(1) A provided external mechanism; or

(2) Tools or implements that are commonly available to the responder in a passenger train emergency.

(c) *Dimensions.* Each rescue access window in a passenger car, including a sleeping car, ordered on or after April 1, 2009, or placed in service for the first time on or after April 1, 2011, shall have an unobstructed opening with minimum dimensions of 26 inches horizontally by 24 inches vertically. A rescue access window located within an exterior side door, in accordance with the requirements of paragraph (a)(3)(i) of this section, may have an unobstructed opening with minimum dimensions of 24 inches horizontally by 26 inches vertically. A seatback is not an obstruction if it can be moved away from the window opening without using a tool or other implement.

(d) *Marking and instructions.* Each rescue access window shall be marked with retroreflective material. A unique and easily recognizable symbol, sign, or other conspicuous marking shall also be used to identify each such window. Legible and understandable window-access instructions, including instructions for removing the window, shall be posted at or near each rescue access window.

[73 FR 6401, Feb. 1, 2008]

§ 238.115 Emergency lighting.

(a) This section applies to each passenger car ordered on or after September 8, 2000, or placed in service for the first time on or after September 9, 2002. This section applies to each level of a multi-level passenger car.

(b) Emergency lighting shall be provided in each passenger car and shall include the following:

(1) A minimum, average illumination level of 1 foot-candle measured at floor level adjacent to each exterior door and each interior door providing access to an exterior door (such as a door opening into a vestibule);

(2) A minimum, average illumination level of 1 foot-candle measured 25 inches above floor level along the center of each aisle and passageway;

(3) A minimum illumination level of 0.1 foot-candle measured 25 inches above floor level at any point along the center of each aisle and passageway; and

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(4) A back-up power system capable of:

(i) Operating in all equipment orientations within 45 degrees of vertical;

(ii) Operating after the initial shock of a collision or derailment resulting in the following individually applied accelerations:

(A) Longitudinal: 8g;

(B) Lateral: 4g; and

(C) Vertical: 4g; and

(iii) Operating all emergency lighting for a period of at least 90 minutes without a loss of more than 40% of the minimum illumination levels specified in this paragraph (b).

§ 238.117 Protection against personal injury.

On or after November 8, 1999, all moving parts, high voltage equipment, electrical conductors and switches, and pipes carrying hot fluids or gases on all passenger equipment shall be appropriately equipped with interlocks or guards to minimize the risk of personal injury. This section does not apply to the interior of a private car.

§ 238.119 Rim-stamped straight-plate wheels.

(a)(1) Except as provided in paragraph (a)(2) of this section, on or after November 8, 1999, no railroad shall place or continue in service any vehicle, other than a private car, that is equipped with a rim-stamped straight-plate wheel if a brake shoe acts on the tread of the wheel for the purpose of slowing the vehicle.

(2) A commuter railroad may continue in service a vehicle equipped with a Class A, rim-stamped straight-plate wheel mounted on an inboard-bearing axle until the railroad exhausts its replacement stock of wheels held as of May 12, 1999, provided the railroad does not modify the operation of the vehicle in any way that would result in increased thermal input to the wheel during braking.

(b) A rim-stamped straight-plate wheel shall not be used as a replacement wheel on a private car that operates in a passenger train if a brake shoe acts on the tread of the wheel for the purpose of slowing the car.

(c) The requirements of this section do not apply to a wheel that is periodically

tread-braked for a short duration by automatic circuitry for the sole purpose of cleaning the wheel tread surface.

§ 238.121 Emergency communication.

(a) *PA system (public address system).*

(1) *Existing Tier I passenger cars.* On or after January 1, 2012, each Tier I passenger car shall be equipped with a PA system that provides a means for a train crewmember to communicate by voice to passengers of his or her train in an emergency situation.

(2) *New Tier I and all Tier II passenger cars.* Each Tier I passenger car ordered on or after April 1, 2008, or placed in service for the first time April 1, 2010, and all Tier II passenger cars shall be equipped with a PA system that provides a means for a train crewmember to communicate by voice to passengers of his or her train in an emergency situation. The PA system shall also provide a means for a train crewmember to communicate by voice in an emergency situation to persons in the immediate vicinity of his or her train (*e.g.*, persons on the station platform). The PA system may be part of the same system as the intercom system.

(b) *Intercom system.* (1) *New Tier I and all Tier II passenger cars.* Each Tier I passenger car ordered on or after April 1, 2008, or placed in service for the first time on or after April 1, 2010, and all Tier II passenger cars shall be equipped with an intercom system that provides a means for passengers and crewmembers to communicate by voice with each other in an emergency situation. Except as further specified, at least one intercom that is accessible to passengers without using a tool or other implement shall be located in each end (half) of each car. If any passenger car does not exceed 45 feet in length, or if a Tier II passenger car was ordered prior to May 12, 1999, only one such intercom is required. The intercom system may be part of the same system as the PA system.

(2) *Marking and instructions.* The following requirements apply to each Tier I passenger car on or after April 1, 2010 and to all Tier II passenger cars: